Training and Evaluation Outline Report

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Task Number: 05-PLT-5504

Task Title: Inspect Underwater Structures

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Destruction Notice: None
Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Fort Leonard Wood, MO foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf	Yes	No
	NTRP 4-04.2.8	Conventional Underwater Construction and Repair Techniques	Yes	Yes
	NTRP 4-04.2.9	Expedient Underwater Construction and Repair Techniques	Yes	No
	TM 3-34.73	PORT CONSTRUCTION AND REPAIR	Yes	No

Conditions: The element is given an Operation Order (OPORD) with a requirement to inspect an underwater structure at a designated location. A secured area or a security element is provided. The inspection equipment and a boat with a motor are provided. This task should not be trained in MOPP 4.

Note: The Commander must still determine at what level of training they would want the element to perform. Crawl, walk or run. This can only be determined after consideration as to the units training level.

The Commander prior to evaluating an element in the conduct of the task must determine if it will be conducted in a Live, Virtual, or Constructive environment, additionally it must also be determined which condition as described below that the element will conduct the task. The selection made for this task is at a trained level of proficiency. The commander must determine which of the environments below will best suit the unit and the proficiency level at which the unit is. When conducting crawl or walk level training units should not increase the intensity until the unit has achieved the standards and then unit trainers should include variables that increase proficiency in all conditions.

Note: The condition statement for this task is written assuming the highest training conditions reflected on the Task Proficiency matrix required for the evaluated unit to receive a "fully trained" (T) rating.

Note: Condition terms definitions:

Dynamic Operational Environment: Three or more operational and two or more mission variables change during the execution of the assessed task. Operational variables and threat Tactics, Techniques, and Procedures (TTPs) for assigned counter-tasks change in response to the execution of Blue Forces (BLUFOR) tasks.

Complex Operational Environment: Changes to four or more operational variables impact the chosen friendly COA/mission. Brigade and higher units require all eight operational variables of Political, Military, Economic, Social, Infrastructure, Information, Physical environment, and Time (PMESII-PT) to be replicated in varying degrees based on the task being trained.

Single threat: Regular, irregular, criminal or terrorist forces are present.

Hybrid threat: Diverse and dynamic combination of regular forces, irregular forces, and/or criminal elements all unified to achieve mutually benefiting effects.

This task should not be trained in MOPP 4.

Standards: The element must inspect and record all critical dimensions and report the structural integrity of the underwater structure to the appropriate authority within the time constraints of the OPORD.

Note: Leaders are defined as the Commander, Executive Officer, First Sergeant, Operations Sergeant, Platoon Leaders, Platoon Sergeants, Squad Leaders, and Team Leaders.

Live Fire Required: No

Objective Task Evaluation Criteria Matrix:

Plan and Prepare			Execute						Assess
Operational Environment		Training Environment (L/V/C)	% of Leaders Present at Training/Authorized	% of Soldiers Present at	External Eval	% Performance Measures 'GO'	% Critical Performance Measures 'GO'	% Leader Performance Measures 'GO'	Task Assessment
SQD & PLT									
Dynamic (Single Threat)	Day	IAW unit CATS statement.	>=85%	>=80%	Yes	>=91%	All	>=90%	**T**
Static (Single Threat)			75-84%			80-90%		80-89%	**T-**
			65-74%	75-79%	No	65-79%			**P**
			60-64%	60-74%		51-64%	<All	<=79%	**P-**
			<=59%	<=59%		<=50%			**U**

Remarks: None

Notes: All required references and technical manuals will be provided by the local Command.

Safety Risk: Medium

Task Statements

Cue: None

DANGER

Leaders have an inherent responsibility to conduct Risk Management to ensure the safety of all Soldiers and promote mission accomplishment.

WARNING

Risk management is the Army's primary decision-making process to identify hazards, reduce risk, and prevent both accidental and tactical loss. All Soldiers have the responsibility to learn and understand the risks associated with this task.

CAUTION

Identifying hazards and controlling risks across the full spectrum of Army functions, operations and activities is the responsibility of all Soldiers.

Performance Steps and Measures

NOTE: Assess task proficiency using the task evaluation criteria matrix.

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps.

STEP/MEASURE	GO	NO-GO	N/A
+* 1. The element leader examines the OPORD and prepares for the mission.			
+* a. Ensures that the OPORD contains all critical information.			
* b. Evaluates blueprints and as-built drawings to determine the critical inspection points.			
* c. Obtains any relative information from on site personnel.			
+* d. Determines the need for any special construction equipment/material to conduct the inspection.			
+* e. Ensures that the level of inspection (I, II, or III) was clearly stated in the OPORD and understood at all levels of command.			
+* f. Plans the mission and completes the operation plan (OPLAN).			
+* g. Marks all critical areas to be inspected.			
* h. Briefs the inspection team.			
+* i. Inspects personnel and equipment.			
+ 2. The element conducts inspections of the marine structure.			
+ a. The element inspects the present state of the structure.			
(1) Inspects wood structures from the mud line up to the base for signs of the following damage:			
(a) Biological attack.			
(b) Shrinkage.			
(c) Overloading.			
(d) Structural connection corrosion.			
(e) Abrasion damage.			
(f) Mechanical damage.			
(2) Inspects steel structures from the mud line up to the base for signs of the following damage:			
(a) Cathodic protection corrosion.			
(b) Abrasion.			
(c) Loosening of structural connections.			
(d) Fatigue.			
(e) Overloading.			
(f) Loss of foundation materials.			
(g) Mechanical damage.			
(3) Inspects concrete structures from the mud line up to the base for signs of the following damage:			
(a) Weathering (freezing/thawing deterioration).			
(b) Abrasion wear.			
(c) Chemical deterioration.			
(d) Axial overloading.			
(e) Shrinkage.			
(f) Swelling.			
(g) Discoloration, cracks, and spalling.			
(h) Mechanical damage.			
+ b. The element records all data on the standard pile inspection record sheet, including the dimensions of the piles, connecting hardware, and strength members.			
+* 3. The element leader verifies inspection data.			
* a. Ensures that all critical areas are inspected.			
+* b. Ensures that all data is accurate and properly recorded.			
4. The element disassembles, performs Preventive Maintenance Checks and Services (PMCS), and stores the equipment properly.			
* 5. The element leader conducts an After Action Review (AAR).			
* 6. The element leader submits reports and forwards all pertinent data and any recommendations to the appropriate authority.			

TASK PERFORMANCE / EVALUATION SUMMARY BLOCK							
ITERATION	1	2	3	4	5	M	TOTAL
TOTAL PERFORMANCE MEASURES EVALUATED							
TOTAL PERFORMANCE MEASURES GO							
TRAINING STATUS GO/NO-GO							

ITERATION: 1 2 3 4 5 M

COMMANDER/LEADER ASSESSMENT: T P U

Mission(s) supported: None

MOPP 4: Never

MOPP 4 Statement: None

NVG: Never

NVG Statement: None

Prerequisite Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	05-CO-0007	Prepare an Operation Order (OPORD)	05 - Engineers (Collective)	Approved
	71-CO-5100	Conduct Troop Leading Procedures for Companies	71 - Combined Arms (Collective)	Approved

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
2.	05-PLT-5506	Maintain Underwater Structures	05 - Engineers (Collective)	Approved
2.	05-PLT-5505	Repair Underwater Structures	05 - Engineers (Collective)	Approved
2.	05-PLT-5509	Perform Self-Contained Underwater Breathing Apparatus (Scuba) Operations	05 - Engineers (Collective)	Approved
6.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-2-9010	OPFOR Disrupt (Company and below)	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-12D-1701	Rescue a Diving Casualty Underwater	052 - Engineer (Individual)	Approved
	052-238-1607	Perform Underwater Photography	052 - Engineer (Individual)	Approved
	052-238-1620	Inspect Underwater Steel Structures	052 - Engineer (Individual)	Approved
	052-238-1621	Inspect Underwater Concrete Structures	052 - Engineer (Individual)	Approved
	052-238-1622	Inspect Underwater Timber Structures	052 - Engineer (Individual)	Approved
	052-238-1639	Chart a Dive	052 - Engineer (Individual)	Approved
	052-238-1640	Operate a Diving Console	052 - Engineer (Individual)	Approved
	052-238-1645	Charge an Air System	052 - Engineer (Individual)	Approved
	052-238-1652	Perform an Underwater Survey	052 - Engineer (Individual)	Approved
	052-238-2511	Direct the Setup of a Scuba Station	052 - Engineer (Individual)	Approved
	052-238-2512	Direct the Setup of a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3412	Select a Decompression Method	052 - Engineer (Individual)	Approved
	052-238-3413	Supervise a Scuba Dive Station	052 - Engineer (Individual)	Approved
	052-238-3414	Supervise a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3416	Calculate Breathing Gas Requirements to Support Diving Operations	052 - Engineer (Individual)	Approved
	052-238-3431	Conduct a Predive Briefing of a Scuba Dive Station	052 - Engineer (Individual)	Approved
	052-238-4508	Prepare a Diving-Mission Operation Order (OPORD)	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 1.6.4	Provide Diver Support

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
D32859	DIV EQ ST DIV SUP A	1
D49154	DIV EQ ST IND SWMMR	1
D32723	DIV EQ ST OPEN CIR	1
92018N	Cylinder Scuba Tanks, 3500 Psi 80-102 Cu Ft	1
D32927	DIV EQ ST DIV SUP B	1

Materiel Items (NSN)

NSN	LIN	Title	Qty
No materiel items specified			

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card. .

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. .